

THE HOUSE AND GROUNDS

Rotation of Garden Crops

IN planting for a rotation of crops the later plants should differ from those that they succeed, both in type and character. Care in this particular will minimize attacks by insects and disease and insure the proper nourishment of the second crop. Do not have root plants, such as beets and carrots, nor plants of the same family, like cabbage and Brussels sprouts, or tomatoes and peppers, follow each other.

It is a good idea to divide plants into root crops, fruiting crops and foliage crops, and have members of the several groups alternate. The following chart, furnished by the United States Department of Agriculture, will help persons who desire to use their soil to the best advantage and by means of successive plantings and rotations:—

1.—Crops occupying the ground all season:—Asparagus, rhubarb, beans, pole snap; beans, pole Lima; beets, late; carrots, late; parsnips, salsify, corn, late; cucumbers, melons, squash, pumpkins, tomatoes, eggplant, peppers, onions (from seeds), leeks, okra, potatoes, main crop; rutabagas.

2.—Successive crops:—Radish, spinach, lettuce, peas, beans, dwarf; parsley, turnips, kohlrabi.

3.—Early crops which may be followed by others:—Onion sets, beets, early; turnips, early; carrots, early; corn, early; cabbage, early.

4.—Late crops which may follow others:—Beets, late; spinach, peas, late; celery, cabbage, late; Brussels sprouts, cauliflower, kale, endive, flat turnips.

After the garden seeds have sprouted or after the plants have been set in their permanent positions cultivation becomes of the utmost importance. A crust should never be permitted to form on the surface of the soil. Hand tools or a wheel cultivator should be kept constantly moving among the plants. This will enable the air to penetrate the soil and facilitate chemical action and bacterial activity. It will destroy the weeds, which take the nourishment needed for the vegetables, and it will conserve moisture. The rake is a particularly valuable tool. By passing it back and forth over the ground the soil will become open and mellow. If the ground is too hard, however, a hoe must be used to break it up. A wheel cultivator will save labor. For close work around the vegetables there will have to be a certain amount of hand weeding. It is best to do the weeding on a bright sunny day, so that the weeds will not take root again, which so many of them do with appalling rapidity, but will shrivel up and die.

While it is desirable to cultivate after a rain as soon as the excess moisture has soaked in or partially evaporated, it must not be done too soon, or the muddy soil will harden into cakes.

Most garden plants may be guarded against disease and insects by spraying at intervals of two weeks with a combination of Bordeaux mixture and arsenate of lead.

Larger eating insects may be knocked into a pan of water on which is a thin scum of kerosene. Young plants may be protected by putting over them frames covered with mosquito netting, cheesecloth or wire netting. Little collars of paper or tin placed around the plants will protect plants from cut worms.

As sucking insects live on the internal juices of plants they cannot be killed by poisoning the surface. To destroy them nicotine solutions, fish oil and other soap solutions and kerosene emulsion are employed.

The following table lists the insects most likely to appear in the vegetable garden and furnishes information in regard to the plants attacked and the treatment recommended:—

During prolonged drought water must be supplied artificially. Sprinkling with the hose is good, but a mere dampening of the surface is not enough. The ground should be thoroughly soaked, and it should be done in the late afternoon, so that too much of the moisture will not be evaporated by the hot sun. A better system of supplying moisture is to make furrows between the rows of vegetables and to let the water freely into these, afterward covering them by the dry earth.

It is almost impossible to have a successful garden in these times unless one provides beforehand the materials and apparatus necessary to protect plants against diseases and insects. Parasitic maladies, such as the various blights, are caused by fungi or germs, and usually may be prevented or controlled by spraying with Bordeaux mixture. If there is some malady that does not yield to the Bordeaux mixture it may be necessary to pull up and burn the plants affected by it.

Eating insects may be killed by spraying with poisonous solutions or dusting with powders, arsenate of lead being the poison most generally employed. As this is poisonous to human beings, it should not be applied to vegetables that are soon to be used.



City Gardeners

"CITY gardeners who have failed to make a success have usually failed because they depend upon one garden and neglect to make the ground yield two or three crops," says the Emergency Garden Commission. "At considerable trouble and expense they prepare a garden bed, and when one crop has been taken off allow the ground to lie idle for the rest of the season, instead of being made to produce more vegetables."

"In order to get gardening under way immediately, the commission has prepared a list of vegetables to be planted first. All are quick maturing plants, such as radishes, early beets, lettuce and carrots. Parsnips are to be planted early and have the benefit of the entire growing season. It is planned that the radish and lettuce later give way to bunch beans. When the beet season is over the ground can be utilized for late cabbage plants. Onion sets, it is shown, should be planted in order to mature in time to make space for planting tomatoes."

"Prospective gardeners are warned that the essentials for successful gardening are soil, water and cultivation, and also that much depends upon the grower, the season and the crops selected. First aid to the gardener has been carefully worked out by the Emergency Food Commission, and may be readily obtained by application."

"The best way to avoid weeds is to plant so many vegetables that the weeds will have no space to grow in. One can pick up many useful ideas by making little Sunday excursions to the market gardens on the outskirts of the city and seeing some of the methods used by the gardeners there, who must make every inch of ground work all the time to pay a decent interest on the heavy cost of the land."

"For instance, one may see dwarf peas planted early in the spring. As soon as these have received sufficient cultivation sweet corn will be planted between the

rows. The peas are harvested and the vines ready to be turned under to enrich the soil with their humus by the time the corn is ready for cultivation. When the corn is tilled enough, turnips will be planted broadcast between the rows, and



Guard Potatoes Against Foes

PRACTISE fairly level cultivation for potatoes; that is, do not mound the soil up about the plants excessively. After the plants have appeared above the surface of the ground the field may be harrowed. After the plants have attained a height of from two to four inches they should be given frequent cultivations with a five toothed cultivator. The number of times to cultivate will depend to a great extent on the season and the type of soil. The object is to keep down all weeds and to maintain a fine dust mulch over the ground, to conserve moisture. The cultivation should be continued until the end of the season, or until the growth of the plants renders it impossible without injury to plants.

Spraying must be done as a protection against the potato bug and against the disease known as potato blight. For the potato bug, spray with arsenate of lead, dissolving three or four pounds of arsenate of lead in fifty gallons of water and spraying just as soon as the bugs make their appearance. For the blight, spray with Bordeaux mixture about once a month. Spraying for the potato bug and the potato blight may be done at the same time. Mix the arsenate of lead with the Bordeaux mixture, using three or four pounds of arsenate of lead in fifty gallons of Bordeaux mixture.

Dissolve six pounds of copper sulphate in fifty gallons of water. (Use a wooden tub, as copper sulphate will corrode iron.) Slake six pounds of fresh, thoroughly burnt lime until it forms a milky paste, add it to the fifty gallons of water containing the copper sulphate and stir thoroughly. When arsenate of lead is added to this you have a combination spray that will protect against diseases and insects. The Bordeaux mixture alone will not protect against insects, or the arsenate of lead alone against diseases.

Upper Right—Man and wife cultivating a vacant lot.
Upper Left—Products of a school garden.
Centre—A well kept garden.
Lower—Grain and vegetables on this plot.
(Courtesy National Emergency Food Garden Commission.)

they will be ready just when frost comes in the fall.

"In a small garden a degree of attention can be given to intensive cultivation that cannot be equalled in the market garden because of lack of labor. For that reason the home gardener should use his ingenuity and do better than the commercial gardener in the volume of food produced on a square foot of soil. With sufficient fertilization, plants may be grown so thickly together that the gardener has only room enough to get into the beds for cultivation."

June Not Too Late for Garden

Garden, 20x30 feet.		
2 feet.	Beans, 2 rows, followed by Carrots, Spinach, Rutabagas in August.	
2 feet.	Witloof, 7 1/2 feet.	Parsley, 7 1/2 feet.
Parsnips, 1 row.		
5 feet.	Potato Bed, followed by Winter Garden.	
3 feet.	Lima Beans.	Squash between 2 rows.
5 feet.	Tomatoes, 2 rows.	Cabbage between plants.
	Tomatoes, 2 rows.	Beets between for early greens.
	White Turnips broadcast between, 1 row.	
2 feet.	Lettuce, Radish, Onion Sets followed by Cabbage in July, 2 rows.	Onions, 1 row.
6 feet.	Pepper plants, 1 row.	Beets.
	Okra, 1 row.	
3 feet.	Peas, followed by Beans in August, 2 rows.	
8 feet.	Corn and Field Beans.	Pumpkins all through.
	Cucumbers on outside row.	

THIS plan for a lot 20x30, or even 20x20, provides for a substantial quantity of each vegetable of real food value, for summer as well as for winter, and also for an abundance of salad vegetables.

There are two points in June planting to cheer the belated gardener. One is that seed planted when the ground is well warmed will germinate and grow without check, which is essential to good results. Another is that the many weeds seeds have sprouted and may be killed by a good raking. Practically everything can be planted in June this year, and a June garden will overtake and outgrow a May garden.

One important thing is to plant immediately after the preparation of the soil. This insures the moisture necessary to germination. Garden enthusiasts often plant when the notion seizes them, instead of when conditions are right.

Put the vegetables that require a light soil on that part of the ground that comes nearest to meeting these requirements. On a small plot it is possible to add sand and ashes to lighten it where needed. Put shade loving plants in sheltered positions. Make the ground as rich as possible and keep it stirred.

A good point for women to remember is to do the hard work in the garden in the early morning hours. No one who is unaccustomed to it can stand working in the heat of the midday summer sun, and there is no necessity for it in the ordinary garden. A few hours in the morning, getting up earlier for it, and a little time in the evening, if necessary, will keep the garden in good condition.

—N. Y. H. Feature

Potato Patriotism Is Winning Recruits Among Boys and Girls

NEW YORK, Saturday. POTATO patriots are increasing in number daily. The Woodcraft League of America is devoting its energies to organizing clubs all over the United States whose chief work is the raising of potatoes. This substantial and essential vegetable is as costly as a luxury now, but it is going to cost more unless the population turns to and raises more potatoes.

The general gardener has been discouraged from undertaking this crop, but the specialists may well take it up, and the members of the Woodcraft League are potato specialists this year. A silk flag and a league pennant will be given to the boy or girl who raises the best crop from twenty-four hills, and similar prizes for the one who raises the largest potato.

The Y. M. H. A. of Perth Amboy, N. J., has a group of Woodcraft League boys running a farm camp, and most of the land has been put in potatoes. Boys from the Madison Square Church House are going to pay for their summer camp by raising potatoes.

In some places large tracts of land have been donated to Ernest Thompson Seton, chief of the Woodcraft League, to be worked on a co-operative system. In Westchester county the Committee for Defence gave the land, seed potatoes and other seed, supervision and teams, the League being asked to establish farm camps of boys to do the work.

Forty-eight children of Valley Cottage, N. Y., under the leadership of Mrs. Burton Emmett and the Misses Sullivan and Castles, teachers in the public school, have planted a large plot in potatoes. The children are divided into four teams and to each child is given two rows of twenty-five hills each, and four hills of

corn, to provide material for a corn roast later. There will be prize and week to week competitions for the honor of having the club flag fly from the winning team's plot, and many features to keep the young agriculturists interested when the hot days come.

The Henry Street Settlement has adopted a novel plan to co-ordinate farming and camp life for its boys and girls this summer, in co-operation with the National Emergency Food Garden Commission, of Washington.

The summer camp, at Mahopac Falls, will be converted into an elementary agricultural school, where the boys and girls will be assigned tracts of land, which they will plant and cultivate. A large variety of seeds has been provided by the Food Garden Commission for the cultivation of the land.

The boys and girls will be given all the food they produce upon these tracts for the use of their families. The vegetables will be those which are comparatively easy to raise, but the range will be sufficient to give the young farmers an intensive training in garden work.

To guarantee the success of the experiment the work will be conducted under a trained gardener. Each boy and girl will have to give four or five hours' work every day upon the assigned plot of ground. On rainy days and at other times when these amateur farmers cannot work their tracts there will be talks on soil analysis, fertilizers and their effects, insects that attack vegetables and methods of combating them, and other

topics of kindred interest. An extensive library bearing on garden work is being established.

Durable Woods

WHILE many persons consider wood as lacking in durability and substantial qualities for building purposes, the fact that a number of houses built of the native woods in the early days of the settlement of this country are still standing, some of them in a fair state of preservation, disproves this contention. The lumber of which these houses was built was not well seasoned in the modern idea of that process, but lent itself well to the workmanship of the builders and carpenters who had a feeling for their work. Some persons to-day believe that woods are too much seasoned by artificial methods.

White pine was extensively used in New England and New York, and in the South the yellow pine was largely used. Although these woods are soft, they are not subject to decay and the softness makes them easy to work. When nails are driven through it does not split easily and the nail heads can be well set in. These soft woods absorb and hold paint when well used for the exterior of houses, and the variety of grains and their toughness and softness make them admirable for interior trim whether they are to be painted, stained or varnished.

For outside porches wooden flooring should have the tongues and grooves painted with white lead as the floor is laid. This will make a waterproof floor that will stand all weathers for many years.



Yes! I belong to the Woodcraft League & I'm going to do my bit.
Copyright—Ernest Thompson Seton, Chief of the Woodcraft League of America.